9 Operating Instructions

■ Definition

To prevent personal injury, injury to others and property damage, the following instructions must be followed.

Incorrect operation due to failure to follow instructions will cause harm or damage, the seriousness of which is classified as below:

Warning
This sign warns of death or serious injury.

Caution
This sign warns of injury or damage to property.

The instructions to be followed are classified by the following symbols:

This symbol denotes an action that is PROHIBITED.

These symbols denote actions that are COMPULSORY.

Thank you for purchasing Panasonic Air Conditioner

SAFETY PRECAUTIONS

Installation Precautions

Warning

Do not install, remove and reinstall the unit by yourself.
- Improper installation will cause leakage, electric shock or fire. Please consult an authorized dealer or specialist for the installation work.

Caution

- This air conditioner must be earthed. Improper grounding will cause electric shock.
- Ensure that the drainage piping is connected properly. Otherwise, water will leak.
- Current leakage protection equipment must be installed. Otherwise, electric shock or fire may occur.
- Do not install the unit in a potentially explosive atmosphere.

Operation Precautions

Warning

- Do not share power outlet.
- Do not modify power cord.
- Do not use an extension cord.
- Do not operate with wet hands.
- Do not operate or stop the unit by inserting or pulling out the power plug.
- Do not insert finger or other objects into the indoor or outdoor unit.
- Do not attempt to repair the unit by yourself.
- Do not use rechargeable (Ni-Cd) batteries.
- Keep the remote control away from infants and small children to prevent them from accidentally swallowing the batteries.

- Insert the power plug properly.
- Use specified supply cord.
- If the supply cord is damaged or needed to be replaced, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- Remove the batteries if the unit is not going to be use for a long period of time.
- New batteries of the same type must be inserted following the polarity stated to prevent malfunction of the remote control.
- In case of emergency or abnormal condition (burnt, smell, etc) occurs, turn off the power supply and unplug.

Caution

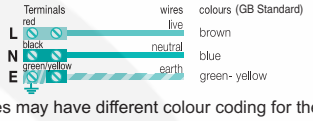
- Do not pull the cord to disconnect the plug.
- Do not wash the unit with water, benzene, thinner or scouring powder.
- Do not use for other purposes such as preservation of food.
- Do not use any combustible equipment at airflow direction.
- Do not sit or place anything on the indoor or outdoor unit.
- Do not expose directly to cold air for a long period.

- Ventilate the room regularly.
- Pay attention as to whether the installation rack is damaged after long period of usage.
- Switch off the power supply and unplug before cleaning or servicing.
- Turn off the power supply and unplug if the unit is not used for a long period of time.

Safety Regulation

The appliance is not intended for use by young children or infirm person without supervision. Young children should be supervised to ensure that they do not play with the appliance.

Replacement or installation of power plugs shall be performed by authorized/qualified personnel only. The wires in this mains lead are coloured in accordance with the following code:



Different countries may have different colour coding for the wires.

Operation Condition (°C)

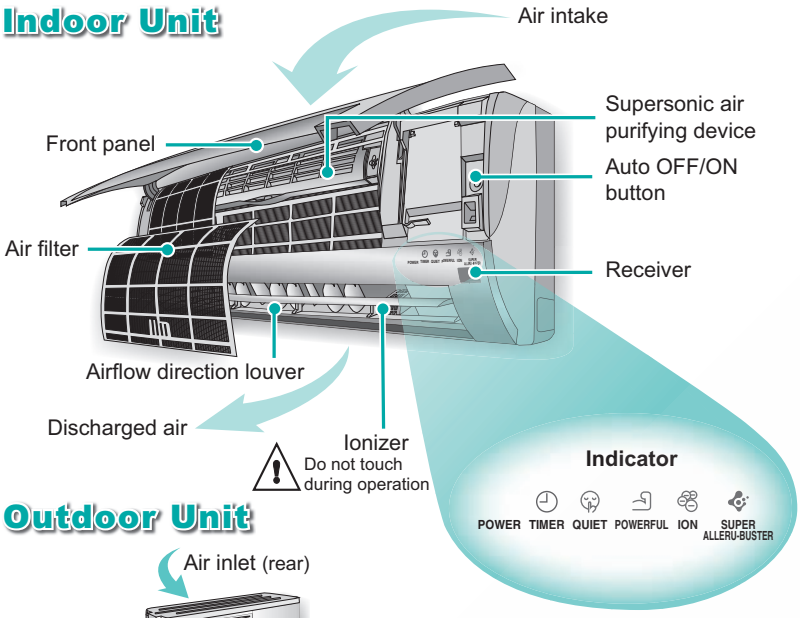
Use this air conditioner under the following temperature range.

DBT: Dry Bulb Temperature WBT: Wet Bulb Temperature	Indoor		Outdoor	
	DBT	WBT	DBT	WBT
Maximum Temperature	32	23	43	26
Minimum Temperature	16	11	16	11

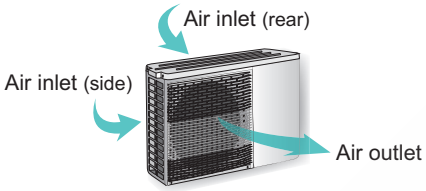
Note: The illustrations in this manual are for explanation purposes only and may differ from the actual unit. It is subjected to change without notice for future improvement.

PRODUCT OVERVIEW

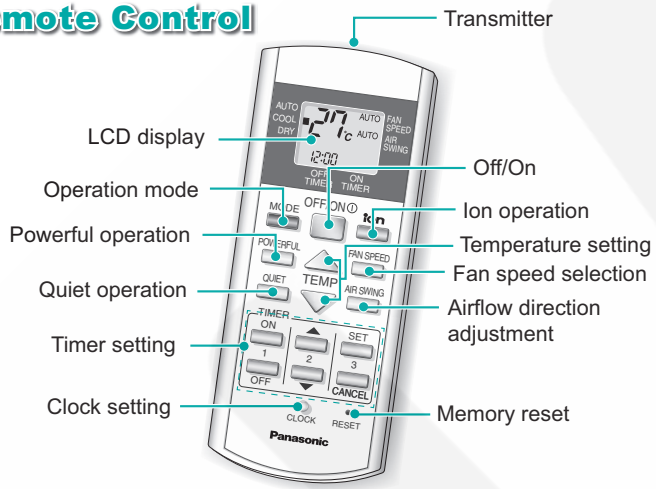
Indoor Unit



Outdoor Unit



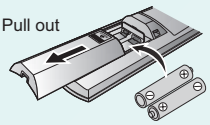
Remote Control



■ About

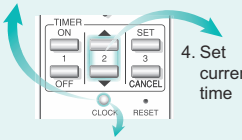
Remote Control Preparation

1. Pull out



2. Insert batteries (AAA or R03)

3. Press CLOCK button



4. Set current time

5. Press again to confirm

- Timer operation will be based on current time set.
- The batteries can be used for approximately 1 year.
- The batteries must be recycled or disposed of properly.

Remote Control Signal

- Make sure it is not obstructed.
- Maximum distances: 10m.
- Certain fluorescent lights may interfere with signal transmission. Consult your dealer.

Auto OFF/ON Button

- To operate the unit if the remote control is misplaced or malfunctioning.

Action	Operation mode
Press once	Automatic Operation
Press until “beep” sound	Cooling Operation

- To OFF, press again the Auto OFF/ON button.
- To switch the remote control signal receiving sound off or on.
  1. Press until “beep” sound and release.
  2. Press again until “beep-beep” sound and release.
  3. Press to switch the sound off or on.

  (Long “beep” - OFF; short “beep” - ON)

Troubleshooting

● Operation delayed for few minutes after restart.	➤ This is a normal self protection control.
● Sound like water flowing during operation.	➤ Caused by refrigerant flow inside.
● Mist emerges from indoor unit.	➤ Condensation effect due to cooling process.
● Noisy during operations.	➤ Installation work could be slanted or front panel didn’t close properly.
● Remote control/display does not work.	➤ Check whether batteries are correctly inserted or need replacement.
● The unit cannot operate.	➤ Check either circuit breaker is tripped, power plug is inserted correctly or timer is used correctly.
● Outdoor unit emits water/steam.	➤ Condensation or evaporation happens at piping surface.

HOW TO OPERATE

Auto, Cool, Dry

■ Operation Details

AUTO - Automatic Operation

- The unit will automatically select the operation mode according to the room temperature.
- Once the operation mode is selected, the unit will operate at the standard setting temperature as shown:

Room temperature	Operation mode	Standard setting temperature
23°C & above	Cool	25°C
Below 23°C	Dry	22°C

- You may press △ or ▽ button to change the standard setting temperature to "HI" or "LO" as shown:

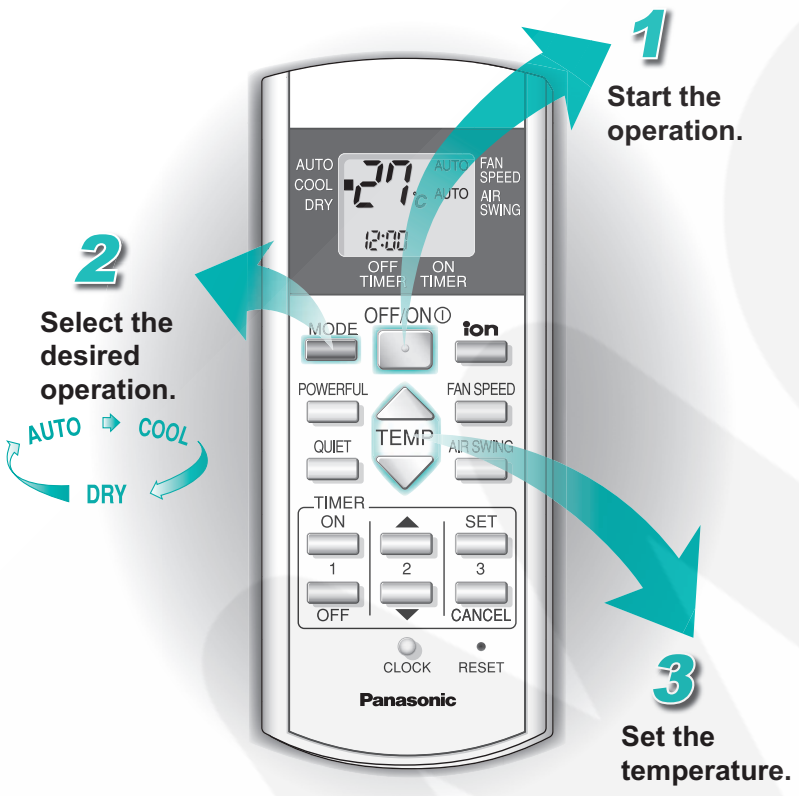
Operation mode	HI	LO
Cool	27°C	23°C
Dry	24°C	20°C

COOL - Cooling Operation

- Enables you to enjoy the cooling effect at your preferred setting temperature.
- The range of temperature can be selected from 16°C ~ 30°C.

DRY - Soft Dry Operation

- Enables you to set the desired temperature at low fan speed which provides you with the dehumidifying surroundings.
- The range of temperature can be selected from 16°C ~ 30°C.



- Supersonic air purifying device (super alleru-buster) operates automatically while the air conditioner is switched on.
- Powerful, Quiet and Ion operations could be activated in all operation modes.
- Press OFF/ON button again to stop the operation.

Hint

- To save electricity, close the curtains when using air conditioner to prevent sunlight and heat from coming in.

Troubleshooting

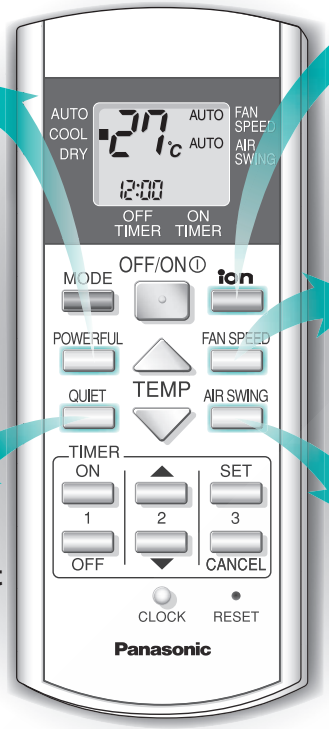
● The room has a peculiar odour.	➤ This may be a damp smell emitted by the wall, carpet, furniture or clothing in the room.
● Air conditioner does not cool efficiently.	➤ Ensure the temperature has been set correctly. ➤ Ensure windows and doors have been closed properly. ➤ Ensure filters are cleaned or replaced when necessary. ➤ Ensure inlet and outlet vents of the units have not been obstructed.

HOW TO OPERATE

Powerful, Quiet, Ion, Fan Speed, Air Swing

POWERFUL
Enables powerful operation.

ION
Enables ion operation.



FAN SPEED
Select fan speed.

QUIET
Enables quiet operation.

AIR SWING
Adjust the vertical airflow direction louver.

- Ion operation could be activated independently.
- Powerful and Quiet operations could not be activated at the same time.
- Powerful, Quiet and Ion operations could be cancelled by pressing the respective button again.

■ Operations Details

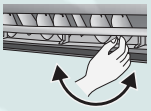
POWERFUL
- To achieve setting temperature quickly. It will operate for 15 minutes and return to the previous setting.

QUIET
- To provide a quiet environment.

ION
- To provide fresh air effect by producing negative ions.

FAN SPEED
- To provide you with the various fan speed selections.
- There are 3 levels of fan speed in addition to automatic fan speed.
- Automatic fan speed:
  The speed of the indoor fan is automatically adjusted according to the operation.

AIR SWING
- To ventilate air in the room.
- There are 5 selections in addition to automatic vertical air flow direction.
- If automatic vertical airflow direction has been set, the louver swings up and down automatically.
- Please do not adjust the vertical airflow direction louver manually.
- Horizontal airflow direction louver could be adjusted manually.



Hints
- If you wish to have the cool air blowing directly on you, set the airflow direction downward but not for an excessive length of time, as it may harm your health.
- Approximately 10% of electricity can be saved if you set the temperature 1°C higher than the desired temperature during cooling operation.

Troubleshooting

● ION indicator on the indoor unit is blinking.	➤ Press ION button twice. If the indicator is still blinking, please consult the dealer.
● Indoor fan stops occasionally during Automatic Fan Speed setting.	➤ This is an advanced feature that helps to remove smell from the surrounding area during operation.

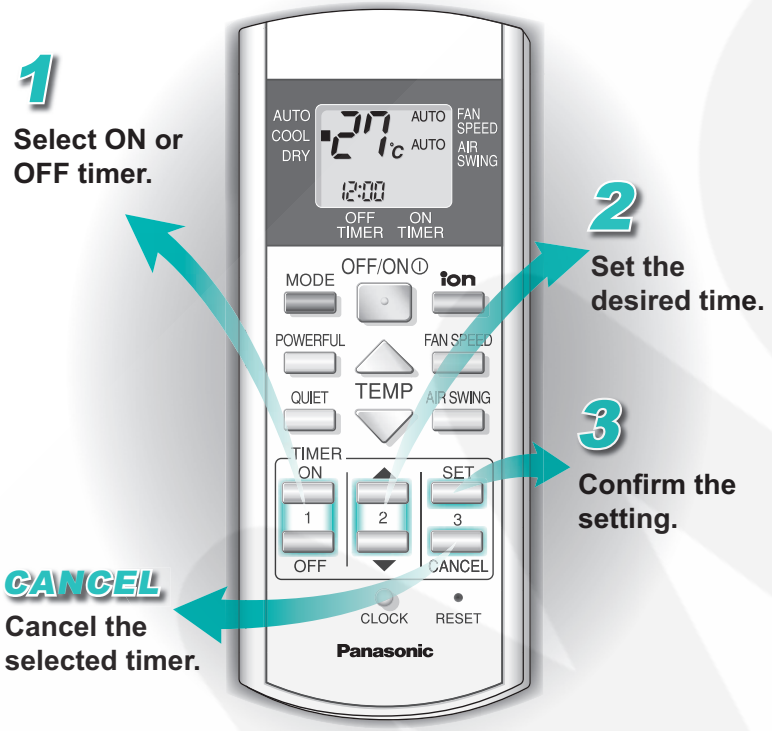
■ Operation Details

TIMER

- Use the ON timer to turn on the air conditioner at the desired time. This will give you a cooling environment, e.g. when you return from work or wake up.
- When the ON timer is set, operation will start 15 minutes before the actual set time.
- Use the OFF timer to stop the air conditioner operation at the desired time. This can save electricity while you are going out or sleeping.
- The set timer will repeat daily once it is set.
- If there is a power failure, you can press SET button to restore the previous setting once the power is resumed.
- If the timer is cancelled, you can restore the previous setting by pressing SET button.

HOW TO OPERATE

Timer



- Ensure the clock on the remote control has been set correctly.
- You could use the ON and OFF timers at the same time.
- To cancel either the ON or OFF timer, press ON or OFF, then press CANCEL.

Hint

- Press CLOCK more than 10 seconds to change the time format from 24 hours to AM/PM format.
- For your convenience, you could set the air conditioner to operate automatically by using both ON and OFF timer.

Troubleshooting

● TIMER indicator always on.	➤ Timer is activated and the setting will repeat itself daily.
● POWER indicator is blinking 15 minutes before ON timer is activated.	➤ The unit is determining the operation mode by sensing the room temperature. This happens when it has been set to AUTO operation mode.

CARE & CLEANING

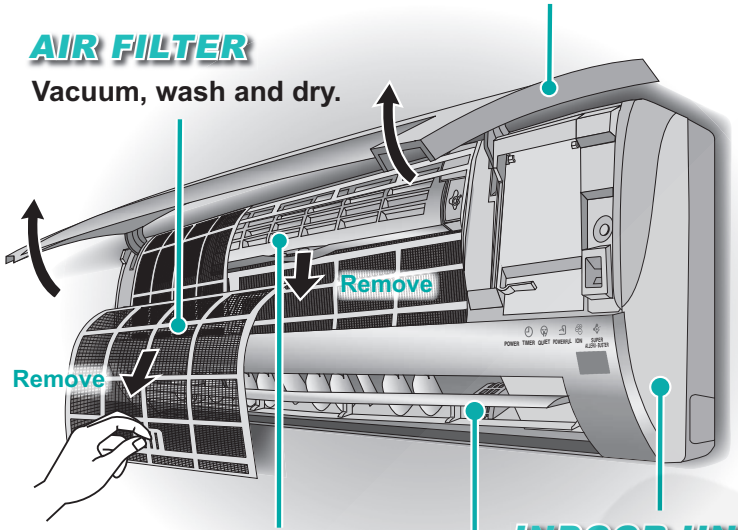
Switch off the power supply before cleaning

FRONT PANEL

Raise and Pull to remove.
Wash and dry.

AIR FILTER

Vacuum, wash and dry.

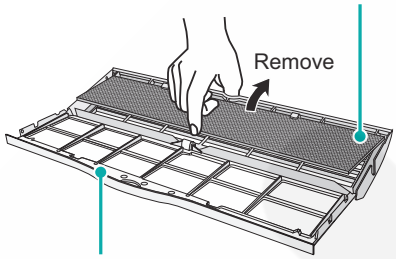


SUPERSONIC AIR PURIFYING DEVICE

INDOOR UNIT

Wipe gently.

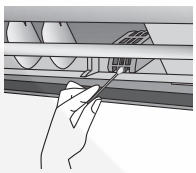
Vacuum the super alleru-buster filter.



Vacuum, wash and dry the frame.

IONIZER

Clean with cotton bud.



■ Washing Instructions

- Do not use benzene, thinner or scouring powder.
- Use soaps or neutral household detergent (≃pH7) only.
- Do not use water with temperature higher than 40°C.

INDOOR UNIT

- Wipe the unit gently with a soft, dry cloth.

AIR FILTER

- It is recommended to clean the air filters once every 2 weeks.
- Purchase the replacement filter if it is damaged.

  Part no.: CWD001144

SUPER ALLERU-BUSTER

- It is recommended to clean the filter every 6 months.
- Replace the filter every 3 years or purchase the replacement filter if it is damaged.

  Part no.: CZ-SA13P

IONIZER

- It is recommended to clean the ionizer every 6 months.

■ Preparation for extended Non-operation

- Operate the unit for 2~3 hours using ion operation to dry the internal parts.
- Turn off the power supply and unplug.
- Remove the remote control batteries.

■ Pre-season Inspection

- This inspection is recommended before operating the air conditioner at every season.
- Check if the remote control batteries needed to be replaced.
- Ensure there is no obstruction at all air intake and outlet vents.
- After the start of operation for 15 minutes, it is normal if the temperature differences between air intake and outlet vents at indoor unit is:-

Operation	Temperature
Cooling	≥ 8°C

Hints

- Clean the filter regularly as dirty filters will cause unpurified air, low cooling or heating capacity, unpleasant smells and higher energy consumption.
- The unit will become dirty and the performance of the unit will decrease after used for several seasons. Please consult an authorized dealer to perform seasonal inspections in addition to regular cleaning.
- This air conditioner is equipped with a built-in surge protective device. However, in order to further protect your air conditioner from being damaged by abnormally strong lightning activity, you may switch off the power supply.

10 Installation Instructions

Required tools for Installation Works			
1. Philips screw driver	5. Spanner	9. Gas leak detector	13. Multimeter
2. Level gauge	6. Pipe cutter	10. Measuring tape	14. Torque wrench 18 N.m (1.8 kgf.m) 42 N.m (4.2 kgf.m) 55 N.m (5.5 kgf.m)
3. Electric drill, hole core drill (ø70 mm)	7. Reamer	11. Thermometer	15. Vacuum pump
4. Hexagonal wrench (4 mm)	8. Knife	12. Megameter	16. Gauge manifold

10.1. Safety Precautions

- Read the following “SAFETY PRECAUTIONS” carefully before installation.
- Electrical work must be installed by a licensed electrician. Be sure to use the correct rating of the power plug and main circuit for the model to be installed.
- The caution items stated here must be followed because these important contents are related to safety. The meaning of each indication used is as below. Incorrect installation due to ignoring of the instruction will cause harm or damage, and the seriousness is classified by the following indications.

⚠ **WARNING**	This indication shows the possibility of causing death or serious injury.
⚠ **CAUTION**	This indication shows the possibility of causing injury or damage to properties only.

The items to be followed are classified by the symbols:

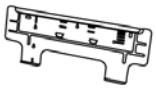
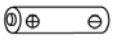
	Symbol with background white denotes item that is PROHIBITED from doing.

- Carry out test running to confirm that no abnormality occurs after the installation. Then, explain to user the operation, care and maintenance as stated in instructions. Please remind the customer to keep the operating instructions for future reference.

⚠ **WARNING**	
1. Engage dealer or specialist for installation. If installation done by the user is defective, it will cause water leakage, electrical shock or fire.	
2. Install according to this installation instruction strictly. If installation is defective, it will cause water leakage, electrical shock or fire.	
3. Use the attached accessories parts and specified parts for installation. Otherwise, it will cause the set to fall, water leakage, fire or electrical shock.	
4. Install at a strong and firm location which is able to withstand the set’s weight. If the strength is not enough or installation is not properly done, the set will drop and cause injury.	
5. For electrical work, follow the local national wiring standard, regulation and this installation instruction. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect found in electrical work, it will cause electrical shock or fire.	
6. Use the specified cable (1.5 mm^2) and connect tightly for indoor/outdoor connection. Connect tightly and clamp the cable so that no external force will be acted on the terminal. If connection or fixing is not perfect, it will cause heat-up or fire at the connection.	
7. Wire routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electrical shock.	
8. When carrying out piping connection, take care not to let air substances other than the specified refrigerant go into refrigeration cycle. Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and injury.	
9. When connecting the piping, do not allow air or any substances other than the specified refrigerant (R410A) to enter the refrigeration cycle. Otherwise, this may lower the capacity, cause abnormally high pressure in the refrigeration cycle, and possibly result in explosion and injury.	
10. • When connecting the piping, do not use any existing (R22) pipes and flare nuts. Using such same may cause abnormally high pressure in the refrigeration cycle (piping), and possibly result in explosion and injury. Use only R410A materials. • Thickness of copper pipes used with R410A must be more than 0.8 mm. Never use copper pipes thinner than 0.8 mm. • It is desirable that the amount of residual oil is less than 40 mg/10 m.	
11. Do not modify the length of the power supply cord or use of the extension cord, and do not share the single outlet with other electrical appliances. Otherwise, it will cause fire or electrical shock.	

⚠ CAUTION
1. The equipment must be earthed. It may cause electrical shock if grounding is not perfect.
2. Do not install the unit at place where leakage of flammable gas may occur. In case gas leaks and accumulates at surrounding of the unit, it may cause fire.
3. Carry out drainage piping as mentioned in installation instructions. If drainage is not perfect, water may enter the room and damage the furniture.
ATTENTION
1. Selection of the installation location. Select a installation location which is rigid and strong enough to support or hold the unit, and select a location for easy maintenance.
2. Power supply connection to the room air conditioner. Connect the power supply cord of the room air conditioner to the mains using one of the following method. Power supply point shall be the place where there is ease for access for the power disconnection in case of emergency. In some countries, permanent connection of this room air conditioner to the power supply is prohibited. 1. Power supply connection to the receptacle using a power plug. Use an approved 10A power plug with earth pin for the connection to the socket.. 2. Power supply connection to a circuit breaker for the permanent connection. Use an approved 16A circuit breaker for the permanent connection. It must be a double pole switch with a minimum 3.5 mm contact gap.
3. Do not release refrigerant. Do not release refrigerant during piping work for installation, reinstallation and during repairing a refrigeration parts. Take care of the liquid refrigerant, it may cause frostbite.
4. Installation work. It may need two people to carry out the installation work.
5. Do not install this appliance in a laundry room or other location where water may drip from the ceiling, etc.

Attached accessories

No.	Accesories part	Qty.	No.	Accessories part	Qty.
1	Installation plate 	1	5	Remote control holder	1
2	Installation plate fixing screw	6	6	Remote Control holder fixing screw	2
3	Remote control	1	7	Super alleru-buster filter	1
4	Battery 	2	8	Drain elbow (Only for models: W7CK, W9CK, W12CK)	1

Applicable piping kit

CZ-3F5, 7BP (V7DK, V9DK, W7DK, W9DK)

CZ-4F5, 7, 10BP (V12DK, W12DK)

Select the best location

INDOOR UNIT

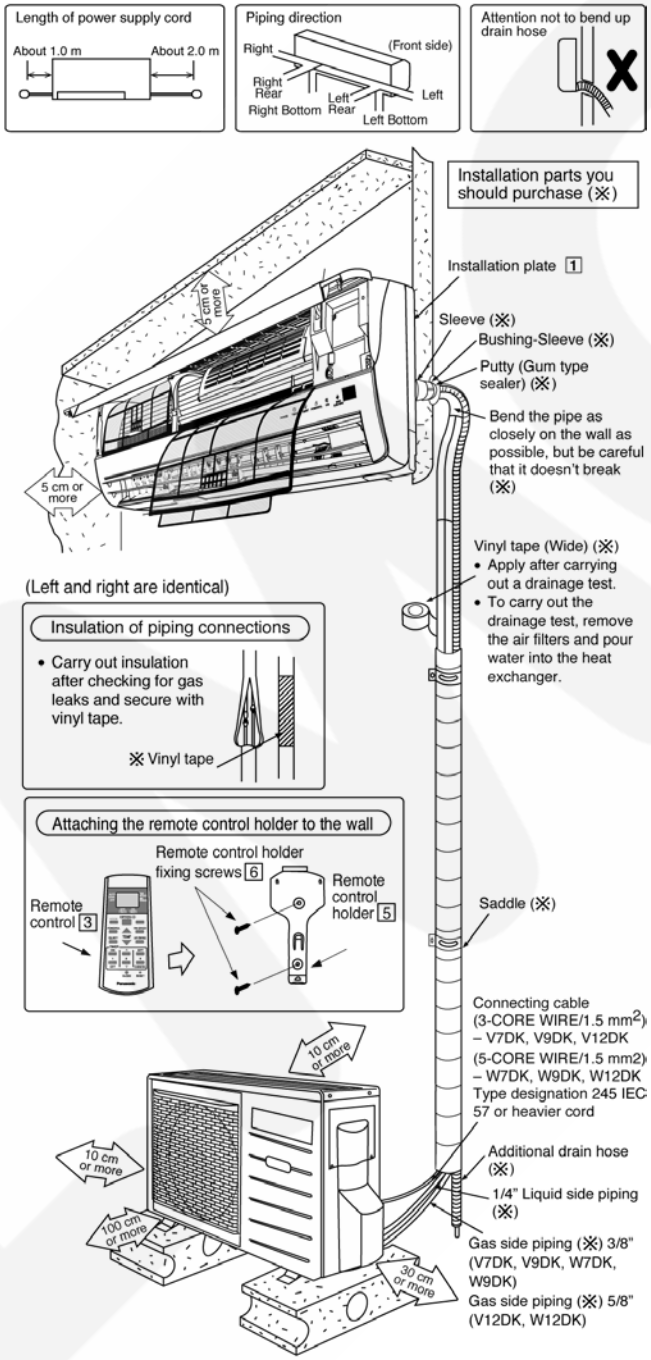
- There should not be any heat source or steam near the unit.
- There should not be any obstacles blocking the air circulation.
- A place where air circulation in the room is good.
- A place where drainage can be easily done.
- A place where noise prevention is taken into consideration.
- Do not install the unit near the door way.
- Ensure the spaces indicated by arrows from the wall, ceiling, fence or other obstacles.
- Recommended installation height for indoor unit shall be at least 2.3 m.

OUTDOOR UNIT

- If an awning is built over the unit to prevent direct sunlight or rain, be careful that heat radiation from the condenser is not obstructed.
- There should not be any animal or plant which could be affected by hot air discharged.
- Keep the spaces indicated by arrows from wall, ceiling, fence or other obstacles.
- Do not place any obstacles which may cause a short circuit of the discharged air.
- If piping length is over the rated length, additional refrigerant should be added as shown in the table.

Model	Piping size		Rated Length (m)	Max. Elevation (m)	Max. Piping Length (m)	Additional Refrigerant (g/m)
	Gas	Liquid				
V7DK/V9DK	3/8"	1/4"	7.5	5	10	10
W7DK/W9DK	3/8"	1/4"	7.5	5	10	20
V12DK	1/2"	1/4"	7.5	5	15	15
W12DK	1/2"	1/4"	7.5	5	15	20

Indoor/outdoor Unit Installation Diagram


Length of power supply cord
About 1.0 m
About 2.0 m
Piping direction
Right
(Front side)
Right Rear
Left Rear
Left
Right Bottom
Left Bottom
Attention not to bend up drain hose
Installation parts you should purchase (※)
Installation plate 1
Sleeve (※)
Bushing-Sleeve (※)
Putty (Gum type sealer) (※)
Bend the pipe as closely on the wall as possible, but be careful that it doesn't break (※)
5 cm or more
Vinyl tape (Wide) (※)
• Apply after carrying out a drainage test.
• To carry out the drainage test, remove the air filters and pour water into the heat exchanger.
(Left and right are identical)
Insulation of piping connections
• Carry out insulation after checking for gas leaks and secure with vinyl tape.
※ Vinyl tape
Attaching the remote control holder to the wall
Remote control holder fixing screws 6
Remote control 3
Remote control holder 5
Saddle (※)
Connecting cable
(3-CORE WIRE/1.5 mm2) – V7DK, V9DK, V12DK
(5-CORE WIRE/1.5 mm2) – W7DK, W9DK, W12DK
Type designation 245 IEC 57 or heavier cord
10 cm or more
100 cm or more
30 cm or more
Additional drain hose (※)
1/4" Liquid side piping (※)
Gas side piping (※) 3/8" (V7DK, V9DK, W7DK, W9DK)
Gas side piping (※) 5/8" (V12DK, W12DK)

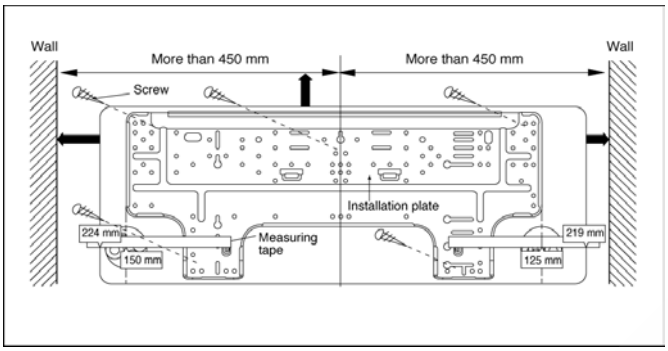
- This illustration is for explanation purposes only. The indoor unit will actually face a different way.

10.2. Indoor Unit

10.2.1. SELECT THE BEST LOCATION (Refer to "Select the best location" section)

10.2.2. HOW TO FIX INSTALLATION PLATE

The mounting wall is strong and solid enough to prevent it from the vibration.



The centre of installation plate should be at more than 450 mm at right and left of the wall.

The distance from installation plate edge to ceiling should more than 67 mm.

From installation plate left edge to unit's left side is 74 mm.

From installation plate right edge to unit's right is 94 mm.

Ⓑ : For left side piping, piping connection for liquid should be about 15 mm from this line.
: For left side piping, piping connection for gas should be about 45 mm from this line.
: For left side piping, piping connection cable should be about 800 mm from this line

1. Mount the installation plate on the wall with 5 screws or more.
   (If mounting the unit on the concrete wall consider using anchor bolts.)
   - Always mount the installation plate horizontally by aligning the marking-off line with the thread and using a level gauge.

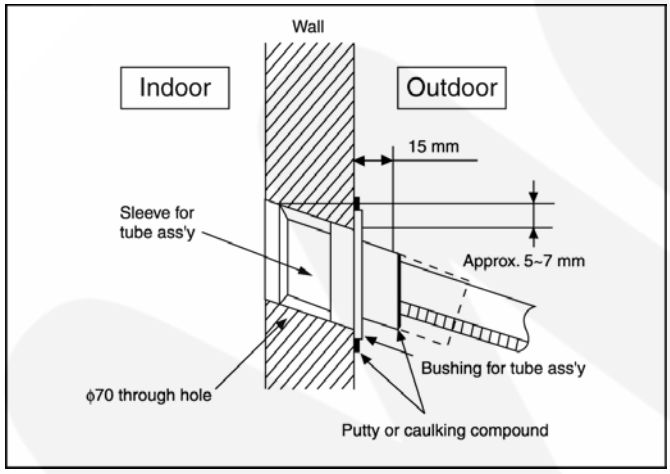
2. Drill the piping plate hole with ø70 mm hole-core drill.
   - Line according to the arrows marked on the lower left and right side of the installation plate. The meeting point of the extended line is the centre of the hole. Another method is by putting measuring tape at position as shown in the diagram above. The hole centre is obtained by measuring the distance namely 150 mm and 125 mm for left and right hole respectively.
   - Drill the piping hole at either the right or the left and the hole should be slightly slanted to the outdoor side.

10.2.3. TO DRILL A HOLE IN THE WALL AND INSTALL A SLEEVE OF PIPING

1. Insert the piping sleeve to the hole.
2. Fix the bushing to the sleeve.
3. Cut the sleeve until it extrudes about 15 mm from the wall.

Caution
When the wall is hollow, please be sure to use the sleeve for tube ass'y to prevent dangers caused by mice biting the connecting cable.

4. Finish by sealing the sleeve with putty or caulking compound at the final stage.



10.2.4. INDOOR UNIT INSTALLATION

1. **For the right rear piping**

Pull out the Indoor piping
↓
Install the Indoor Unit
↓
Secure the Indoor Unit
↓
Insert the connecting cable

2. **For the right and right bottom piping**

Pull out the Indoor piping
↓
Install the Indoor Unit
↓
Insert the connecting cable
↓
Secure the Indoor Unit

3. **For the embedded piping**

Replace the drain hose

↓

Bend the embedded piping

↓

- Use a spring bender or equivalent to bend the piping so that the piping is not crushed.

Install the Indoor Unit

↓

Cut and flare the embedded piping

↓

- When determing the dimension of the piping, slide the unit all the way to the left on the installation plate.
  Refer to the section "Cutting and flaring the piping".

Pull the connecting cable into Indoor Unit

↓

- The inside and outside connecting cable can be connected without removing the front grille.

Connect the piping

↓

- Please refer to "Connecting the piping" column in outdoor unit section. (Below steps are done after connecting the outdoor piping and gas-leakage confirmation.)

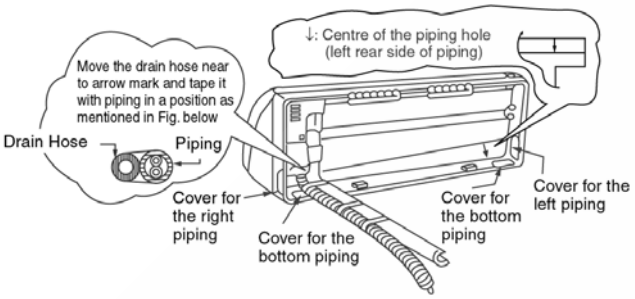
Insulate and finish the piping

↓

- Please refer to "Piping and finishing" column of outdoor section and "Insulation of piping connections" column as mentioned in Indoor/ Outdoor Unit Installation.

Secure the Indoor Unit

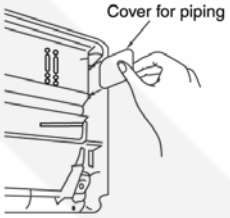
Pull out the piping and drain hose


↓: Centre of the piping hole
(left rear side of piping)
Move the drain hose near to arrow mark and tape it with piping in a position as mentioned in Fig. below
Drain Hose
Piping
Cover for the right piping
Cover for the bottom piping
Cover for the bottom piping
Cover for the left piping

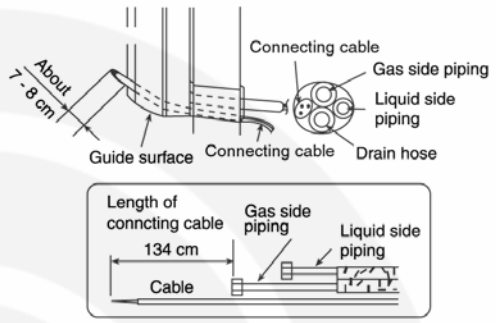
How to keep the cover

In case of the cover is cut, keep the cover at the rear of chassis as shown in the illustration for future reinstallation.

(Left, right and 2 bottom covers for piping)

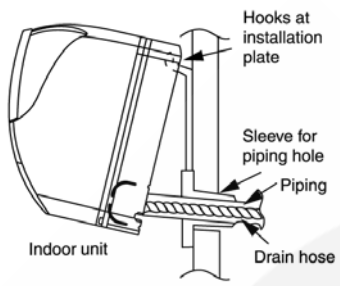


Insert the connecting cable



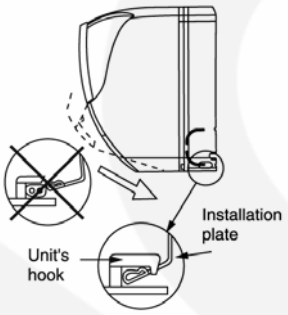
Install the Indoor Unit

Hook the indoor unit onto the upper portion of installation plate (Engage the indoor unit with the upper edge of the installation plate). Ensure the hooks are properly seated on the installation plate by moving in left and right.

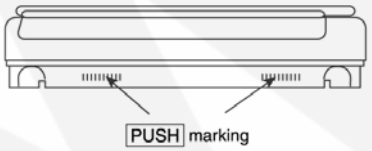


Secure the Indoor Unit

1. Tape the extra power supply cord in a bundle and keep it behind the chassis.
   - Ensure that the power supply cord is not clamped in between the unit's hook (2 positions) and installation plate.
2. Press the lower left and right side of the unit against the installation plate until hooks engages with their slots (sound click).



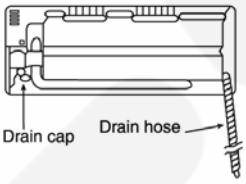
To take out the unit, push the PUSH marking at the bottom unit, and pull it slightly towards you to disengage the hooks from the unit.

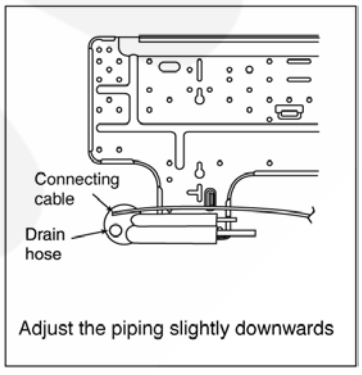


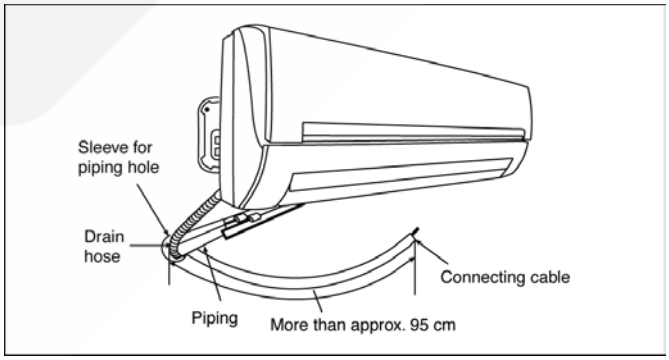
(This can be used for left rear piping & left bottom piping also.)

Exchange the drain hose and the cap

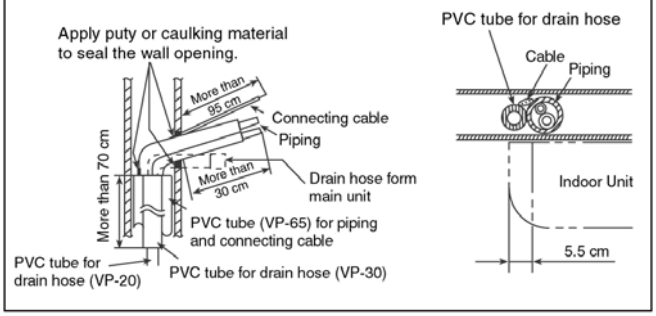
Refer view for left piping installation



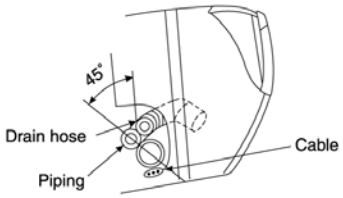




• How to pull the piping and drain hose out, in case of the embedded piping.


Apply puty or caulking material to seal the wall opening.
More than 95 cm
Connecting cable
Piping
More than 70 cm
More than 30 cm
Drain hose form main unit
PVC tube (VP-65) for piping and connecting cable
PVC tube for drain hose (VP-20)
PVC tube for drain hose (VP-30)
PVC tube for drain hose
Cable
Piping
Indoor Unit
5.5 cm

• In case of left piping how to insert the connecting cable and drain hose.



(For the right piping, follow the same procedure)

10.2.5. CONNECT THE CABLE TO THE INDOOR UNIT

1. The inside and outside connecting cable can be connected without removing the front grille.
2. Connecting cable between indoor unit and outdoor unit shall be approved polychloroprene sheathed 3 (V7DK, V9DK, V12DK) or 5 (W7DK, W9DK, W12DK) × 1.5 mm^2 flexible cord, type designation 245 IEC 57 or heavier cord.
   - Ensure the color of wires of outdoor unit and the terminal Nos. are the same to the indoor's respectively.
   - Earth lead wire shall be longer than the other lead wires as shown in the figure for the electrical safety in case of the slipping out of the cord from the anchorage.

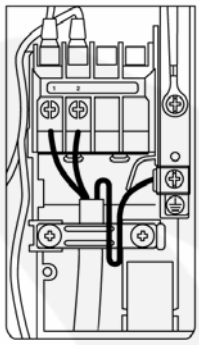
V7DK, V9DK, V12DK

Terminals on the indoor unit	1	2	⏚
Color of wires			
Terminals on the outdoor unit	1	2	⏚

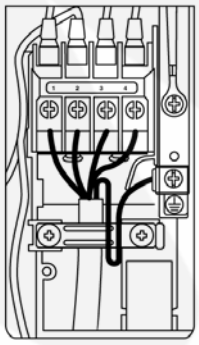
W7DK, W9DK, W12DK

Terminals on the indoor unit	1	2	3	4	⏚
Color of wires					
Terminals on the outdoor unit	1	2	3	4	⏚

- Secure the cable onto the control board with the holder (clamper).



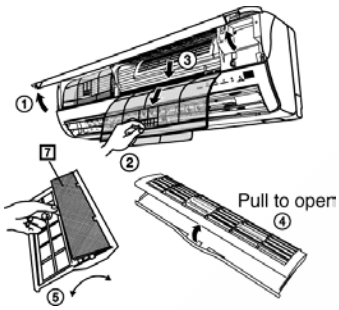
V7DK, V9DK, V12DK



W7DK, W9DK, W12DK

INSTALLATION OF SUPER ALLERU-BUSTER FILTER

1. Open the front panel.
2. Remove the air filter.
3. Remove Supersonic air purifying device.
4. Open the Supersonic air purifying device frame.
5. Insert the super alleru-buster filter and close the Supersonic air purifying device frame as show in illustration at right.

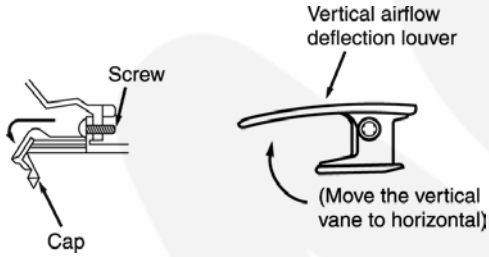


HOW TO TAKE OUT FRONT GRILLE

Please follow the steps below to take out front grille if necessary such as when servicing.

1. Open the intake grille and remove the screw at the front of the front grille.
2. Set the vertical airflow direction louvers to the horizontal position.
3. Slide down the 2 caps on the front grille as shown in the illustration below, and then remove the 2 mounting screws.
4. Pull the lower section of the front grille towards you to remove the front grille.

When reinstalling the front grille, first set the vertical airflow direction louver to the horizontal position and then carry out above steps 2 - 3 in the reverse order.



AUTO SWITCH OPERATION

The below operations will be performed by pressing the “AUTO” switch.

1. AUTO OPERATION MODE

   The Auto operation will be activated immediately once the Auto Switch is pressed.

2. TEST RUN OPERATION (FOR PUMP DOWN/SERVICING PURPOSE)

   The Test Run operation will be activated if the Auto Switch is pressed continuously for more than 5 sec. A “beep” sound will occur at the fifth sec., in order to identify the starting of Test Run operation

3. REMOTE CONTROLLER RECEIVING SOUND ON/OFF

   The ON/OFF of remote controller receiving sound can be change over by pressing the following step:

   a. Release the Auto Switch after Test Run operation is activated.

   b. Then, within 20 sec., after a., press Auto Switch for more than 5 sec.

      A “beep” “beep” sound will occur at the fifth sec., then release the Auto Switch.

   c. Within 20 sec. after b., press Auto Switch again. Everytime Auto Switch is pressed (within 20 sec. interval), remote controller receiving sound status will be reversed between ON and OFF.

      Long “beep” sound indicates that remote controller receiving sound is OFF.

      Short “beep” sound indicates that remote controller receiving sound is ON.

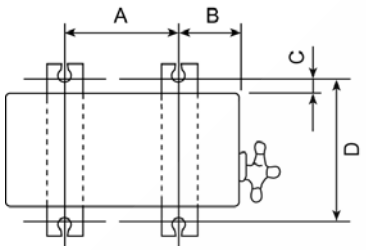
10.3. Outdoor Unit

10.3.1. SELECT THE BEST LOCATION (Refer to "Select the best location" section)

10.3.2. INSTALL THE OUTDOOR UNIT

- After selecting the best location, start installation according to Indoor/Outdoor Unit Installation Diagram.

1. Fix the unit on concrete or rigid frame firmly and horizontally by bolt nut. (ø10 mm).
2. When installing at roof, please consider strong wind and earthquake. Please fasten the installation stand firmly with bolt or nails.



MODEL	A	B	C	D
V7DK, V9DK, W7DK, W9DK	474	87	18.5	261
V12DK, W12DK	570	105	18.5	320

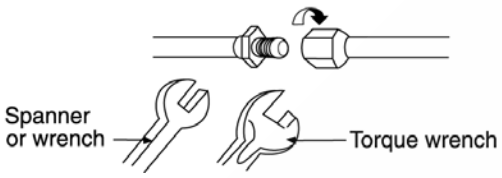
10.3.3. CONNECTING THE PIPING

Connecting The Piping To Indoor Unit

Please make flare after inserting flare nut (locate at joint portion of tube assembly) onto the copper pipe. (In case of using long piping)

Connect the piping

- Align the center of piping and sufficiently tighten the flare nut with fingers.
- Further tighten the flare nut with torque wrench in specified torque as stated in the table.



MODEL	Piping size (Torque)	
	Gas	Liquid
V7DK, V9DK, W7DK, W9DK	3/8" (42 N.m)	1/4" (18 N.m)
V12DK, W12DK	1/2" (55 N.m)	1/4" (18 N.m)

Connecting The Piping To Outdoor Unit

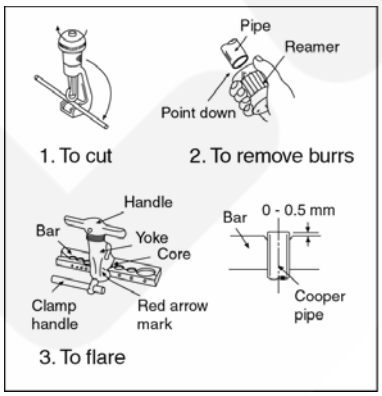
Decide piping length and then cut by using pipe cutter. Remove burrs from cut edge. Make flare after inserting the flare nut (located at valve) onto the copper pipe.

Align center of piping to valves and then tighten with torque wrench to the specified torque as stated in the table.

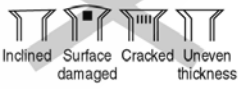
CUTTING AND FLARING THE PIPING

1. Please cut using pipe cutter and then remove the burrs.
2. Remove the burrs by using reamer. If burrs is not removed, gas leakage may be caused.

   Turn the piping end down to avoid the metal powder entering the pipe.
3. Please make flare after inserting the flare nut onto the copper pipes.



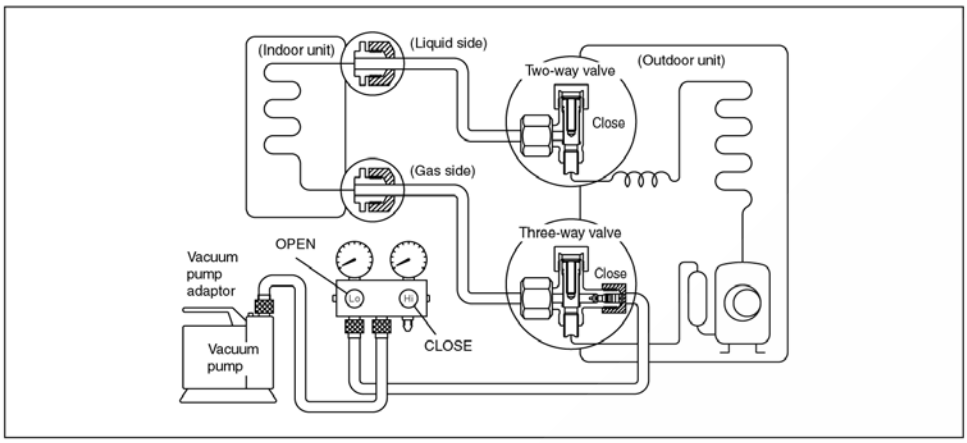
■ Improper flaring ■



When properly flared, the internal surface of the flare will evenly shine and be of even thickness. Since the flare part comes into contact with the connections, carefully check the flare finish.

10.3.4. EVACUATION OF THE EQUIPMENT

WHEN INSTALLING AN AIR CONDITIONER, BE SURE TO EVACUATE THE AIR INSIDE THE INDOOR UNIT AND PIPES in the following procedure.



1. Connect a charging hose with a push pin to the Low and High side of a charging set and the service port of the 3-way valve.
   - Be sure to connect the end of the charging hose with the push pin to the service port.
2. Connect the center hose of the charging set to a vacuum pump with check valve, or vacuum pump and vacuum pump adaptor.
3. Turn on the power switch of the vacuum pump and make sure that the needle in the gauge moves from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa). Then evacuate the air approximately ten minutes.
4. Close the Low side valve of the charging set and turn off the vacuum pump. Make sure that the needle in the gauge does not move after approximately five minutes.

   Note: BE SURE TO FOLLOW THIS PROCEDURE IN ORDER TO AVOID REFRIGERANT GAS LEAKAGE.
5. Disconnect the charging hose from the vacuum pump and from the service port of the 3-way valve.
6. Tighten the service port caps of the 3-way valve at torque of 18 N.m with a torque wrench.
7. Remove the valve caps of both of the 2-way valve and 3-way valve. Position both of the valves to “OPEN” using a hexagonal wrench (4 mm).
8. Mount valve caps onto the 2-way valve and the 3-way valve.
   - Be sure to check for gas leakage.

CAUTION

- If gauge needle does not move from 0 cmHg (0 MPa) to -76 cmHg (-0.1 MPa), in step 3 above take the following measure:
- If the leak stops when the piping connections are tightened further, continue working from step 3.
- If the leak does not stop when the connections are retightened, repair the location of leak.
- Do not release refrigerant during piping work for installation and reinstallation. Take care of the liquid refrigerant, it may cause frostbite.

10.3.5. CONNECT THE CABLE TO THE OUTDOOR UNIT

1. Remove the control board cover from the unit by loosening the screw.
2. Connecting cable between indoor unit and outdoor unit shall be approved polychloroprene sheathed 3 (V7DK, V9DK, V12DK) or 5 (W7DK, W9DK, W12DK) × 1.5 mm^2 flexible cord, type designation 245 IEC 57 or heavier cord.

V7DK, V9DK, V12DK

Terminals on the indoor unit	1	2	⏚
Color of wires			
Terminals on the outdoor unit	1	2	⏚

W7DK, W9DK, W12DK

Terminals on the indoor unit	1	2	3	4	⏚
Color of wires					
Terminals on the outdoor unit	1	2	3	4	⏚

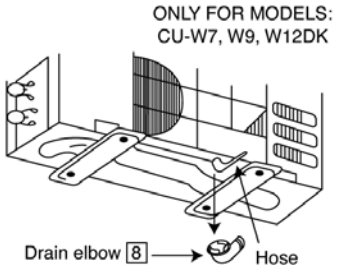
3. Secure the cable onto the control board with the holder (clamper).
4. Attach the control board cover back to the original position with the screw.

10.3.6. PIPE INSULATION

1. Please carry out insulation at pipe connection portion as mentioned in Indoor/Outdoor Unit Installation Diagram. Please wrap the insulated piping end to prevent water from going inside the piping.
2. If drain hose or connecting piping is in the room (where dew may form), please increase the insulation by using POLY-E FOAM with thickness 6 mm or above.

DISPOSAL OF OUTDOOR UNIT DRAIN WATER

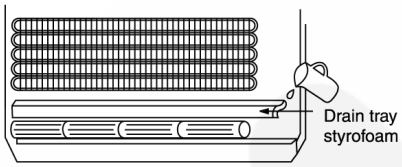
- If a drain elbow is used, the unit should be placed on a stand which is taller than 3 cm.
- If the unit is used in an area where temperature falls below 0°C for 2 or 3 days in succession, it is recommended not to use a drain elbow, for the drain water freezes and the fan will not rotate.



Install the hose at an angle so that the water smoothly flows out.

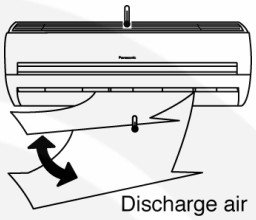
CHECK THE DRAINAGE

- Open front panel and remove air filters.
  (Drainage checking can be carried out without removing the front grille.)
- Pour a glass of water into the drain tray-styrofoam.
- Ensure that water flows out from drain hose of the indoor unit.



EVALUATION OF THE PERFORMANCE

- Operate the unit at cooling operation mode for fifteen minutes or more.
- Measure the temperature of the intake and discharge air.
- Ensure the difference between the intake temperature and the discharge is more than 8°C.



NOTE:
These equipment shall be connected to a suitable mains network with a main impedance less than the following:

CHECK ITEMS

- ☐ Is there any gas leakage at flare nut connections?
- ☐ Has the heat insulation been carried out at flare nut connection?
- ☐ Is the connecting cable being fixed to terminal board firmly?
- ☐ Is the connecting cable being clamped firmly?
- ☐ Is the drainage OK?
  (Refer to “Check the drainage” section)
- ☐ Is the earth wire connection properly done?
- ☐ Is the indoor unit properly hooked to the installation plate?
- ☐ Is the power supply voltage complied with rated value?
- ☐ Is there any abnormal sound?
- ☐ Is the cooling operation normal?
- ☐ Is the thermostat operation normal?
- ☐ Is the remote control’s LCD operation normal?
- ☐ Is the super alleru-buster filter is installed??